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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hirosato Amano

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06/26/2008

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EXAMINER

NIESZ, JASON KAROL

ART UNIT

PAPER NUMBER

3751

NOTIFICATION DATE

DELIVERY MODE

06/26/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/542,089	Applicant(s) AMANO, HIROSATO	
	Examiner JASON K. NIESZ	Art Unit 3751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/10/2005 and 01/29/2008</u> . | 6) <input checked="" type="checkbox"/> Other: <u>EP 1,055,601 A2</u> . |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 08/10/2005 and 01/29/2008 were considered by the examiner.

Specification

3. The disclosure is objected to because of the following informalities: numerous grammatical errors render the specification difficult to comprehend.

The specification is further objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The method step in claim 38 of removing the lid member from the container is unsupported by the specification.

Appropriate correction is required.

Claim Objections

4. Claim 38 is objected to because of the following informalities: the second word of claim 18 is "power" it should be "powder". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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6. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The third tubular body in claim 3 is said to have the function of attracting gas through the filter part. The filter part, as recited earlier in the claims, represents the filter portion that creates a gas path between the first and second tubular bodies. The third tubular body cannot attract gas through the filter part because there is no fluid communication between the third tubular body and said filter part.

For the purpose of the application of prior art claim 3 is interpreted to read as though all instances of "the filter part" are replaced with "a filter part."

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Pope (US Patent 4,976,296).

In Re claim 1 with respect to Figure 1 Pope discloses a powder filling nozzle comprising a tubular body (12) and a gas separating unit (19) (Column 3, lines 3-4), wherein the gas separating unit serves to set the opening in a plugged state by the powder separated from the gas (Column 3, lines 36-40).

In Re claim 2 with reference to Figure 1 Pope discloses a double pipe structure including a first tubular body (12) and a second tubular body (13). Pope discloses said first tubular body being inserted into said second tubular body so that a gap between the two tubular bodies is formed. Pope discloses both ends of said second tubular body being fixed to the first tubular body so as to close the gap. The examiner notes that the body (10) serves to fix the upper end of said second tubular body to said first tubular body to so close said gap. Pope discloses an external gas suction unit (20). Pope discloses the second tubular body having a function of discharging the gas attracted to the first tubular body by operation of the external gas suction unit, from the gas exhausting port through the gas delivery path. (Column 3, lines 36-40). The examiner notes that the gas separation unit from Pope causes material to build up along the inner wall of the first tubular body, clearly indicating that it is not allowing said material to pass.

In Re claim 3 Pope discloses a triple pipe structure including a third tubular body (13) having an inner diameter larger than an outer diameter of the second tubular body. Pope also discloses the second tubular body being inserted into the third tubular body so that a gap between the second and third tubular bodies is formed as a gas delivery path, said third tubular body being fixed at both ends to close said gap. The examiner notes that the body (10) serves to fix the upper end of the third tubular body and so close said gap. Pope also discloses a second external gas suction unit (15) and a filter part (23).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pope as applied to claim 2 above.

Pope discloses the claimed invention except for the filter part being larger than 0.3 times an inner diameter of the opening of the first tubular body. It would have been obvious to one having ordinary skill in the art at the time the invention was made to place this constraint on filter width, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

11. Claims 4, 5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pope in view of Amano (EP 1055601 A2).

In Re claim 4 Pope as applied to claim 1 above discloses all the limitations, but doesn't disclose a gas separating unit comprising a through hole and a filter part.

In Figure 3 Amano discloses a through hole (30) and a filter part (32) which combine to serve as a gas separating unit.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the Pope apparatus by replacing the porous portion (Figure 1, 19) with the through

holes and filter part from Amano. This modification allows for the replacement of only the filter portion in the case where the filter becomes clogged or when a material of different particle size is to be dispensed. Furthermore, it would have been obvious that the portion of the filter which covers the end of the Amano Device should be removed when adding it to the Pope apparatus, in order to allow the powder to be dispensed.

In Re claim 5, 7 and 8 Pope as applied to claim 2 above discloses all the limitations, but doesn't disclose a tubular member of a filter material.

With reference to Figure 5 Amano discloses a tubular filter member (8, 9, 10) comprising a laminated member made of two or more filter materials with different meshes with the fine mesh portion as the innermost filter portion (Column 4, lines 38-45).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the Pope apparatus by replacing the porous portion (Figure 1, 19) with the filter part from Amano. This modification allows for the replacement of only the filter portion in the case where the filter becomes clogged or when a material of different particle size is to be dispensed. Furthermore, it would have been obvious that the portion of the filter which covers the end of the Amano Device should be removed when adding it to the Pope apparatus, in order to allow the powder to be dispensed.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pope in view of Amano as applied to claim 4 above in further view of Ison et al. (US Patent 6,652,083 B2).

In Re claim 6 Pope in view of Amano discloses all the limitations, but doesn't disclose the type of weave used for the filter portion.

Ison discloses a filter for filtering an ink supply using a twill weave (Column 1, lines 55-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a filter manufactured with a twill weave as taught by Ison. Ison teaches twill woven filters as preferable in particle filtration applications because of very low shedding properties (Column 1, lines 62-67).

13. Claims 10-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makino et al. (6,679,301) in view of Pope.

In Re claim 10 with reference to Figure 2, Makino discloses a powder filling device comprising a hermitically sealed powder fluidization unit (10) (Column 4, lines 54-55) and a powder filling nozzle (17). Makino also discloses a container (18) and a delivery path (12). The powder filling nozzle comprises a tubular body (17) for discharging the powder into the container.

Makino doesn't disclose a gas separating unit acting as claimed in claim 10 of the instant application.

Pope as applied to claim 1 above discloses a powder filling nozzle having a tubular body and a gas separating unit acting to plug the nozzle.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Makino device by adding the nozzle from Pope, in order to provide way to precisely control the flow of powder.

In Re claims 11 and 13 Makino in view of Pope as applied to claim 10 above discloses all the limitations. With reference to Figure Pope discloses a powder filling device comprising a double pipe structure (12, 13). The second tubular structure (13) of the double pipe structure is connected to a gas suction unit (20) which acts to remove gas from the powder flow in order to plug the nozzle. Makino also discloses a gas suction nozzle connected to a gas suction unit (Column 9, lines 10-14). The examiner notes that the use of the Pope nozzle in the place of the original Makino nozzle necessarily results in one end of the nozzle being connected to the powder fluidization unit. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Makino apparatus with the second tubular structure from Pope, in order to provide a gas path for the gas removed from the powder during the plugging operation. The examiner notes that this modified device described above in Re claim 11 has two separate gas suction units: one from Pope connected to the second tubular structure and one from Makino connected to the gas suction nozzle.

In Re claim 12 with reference to Figure 3 Makino discloses an embodiment of the gas filling device designed to run on electrical power (21). The examiner notes that the standardization of electrical sources indicates that the device would run equally well when plugged into any standard outlet, regardless of the original source of the electricity. Sunlight energy and wind power energy were commonly known in the art at the time of the invention as sources of electrical power. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to operate

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the apparatus using whatever electrical energy was available, whether from wind or solar power, or from less renewable sources.

In Re claims 14 and 15 Makino in view of Pope as applied to claims 11 and 13 above disclose all the limitations. With reference to Figure 1 Pope discloses a third tubular structure (14) connected to a second gas suction unit (15) and acting as a gas suction nozzle. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Makino device by adding the third tubular structure from Pope and the accompanying gas suction unit, in order to eliminate the need for a second hole in the lid to accommodate a gas suction nozzle.

In Re claim 16 with reference to Figure 2 Makino discloses a lid member (16) which is made of a ventilation porous material and includes a hole for inserting the powder filling nozzle (17) (Column 5, lines 6-11).

In Re claim 17 with reference to Figure 2 Makino discloses an introductory gas control valve (20) and a delivery powder flow control valve (15).

In Re claim 18 with reference to Figure 2 Makino discloses a gas introducing unit (25) comprising a compressed air source (Column 8, line 60). Makino doesn't disclose a pressure vessel. Pressure vessels are commonly known in the art as an easily portable source of compressed air. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a pressure vessel as the compressed air source for Makino, in order to operate the device in a location without another supply of compressed air.

In Re claim 19 with reference to Figure 3 Makino discloses a gas introducing unit comprising a pump (6) and a check valve (8) (Column 6, lines 25-27).

In Re claim 20 Makino as applied to claim 19 above discloses a gas introducing unit. With reference to Figure 2 Makino further discloses a gas dispensing (2) unit for introducing the gas into the powder fluidization unit uniformly (Column 5, lines 34-35).

In Re claim 21 Makino discloses toner (Column 2, lines 50-60). Statements of intended use have been considered and found not to limit the claim beyond the scope of the prior art: the toner disclosed in Makino could be used to develop an electrostatic latent image.

In Re claim 22, the apparatus disclosed in Re claim 10 discloses all the limitations of claim 22 (MPEP 2112.02).

In Re claim 23 Makino in view of Pope as applied to claim 22 above discloses the claimed invention except for the bulk density of the powder lying within a range of 0.1 to 0.2 at the beginning of the filling operation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the claimed range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

In Re claim 24 the apparatus disclosed in Re claim 16 above discloses all the limitations of claim 24 (MPEP 2112.02).

In Re claim 25 Makino discloses the introduction additional of gas into the powder fluidization unit (Column 5, lines 34-35).

In Re claim 26 Makino discloses the step of vibrating the powder fluidization unit (Column 4, lines 37-38).

In Re claims 27 and 28 Makino discloses the step of increasing the pressure within the powder fluidization unit by applying external pressure to decrease the internal volume of the powder fluidization unit (Column 4, lines 39-43).

In Re claim 29 the apparatus disclosed in re claims 11 and 13 above discloses all the limitations of claim 29 (MPEP 2112.02)

In Re claim 30 Makino in view of Pope as applied to claim 22 above discloses the claimed invention except for the bulk density of the powder lying within a range of 0.4 to 0.5 at the end of the filling operation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the claimed range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

In Re claim 31 the apparatus disclosed in Re claim 10 above discloses all the limitations (MPEP 2112.02).

In Re claim 32 Makino in view of Pope as applied to claim 29 above discloses the claimed invention except for the pressure in the first gas suction unit lying within the range of -10kPa to -60kPa. It would have been obvious to

one having ordinary skill in the art at the time the invention was made to use the claimed range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

In Re claim 33 Makino discloses the use of a powder velocity control valve to control an amount of discharge of powder (Column 4, lines 66-67)

In Re claim 34 the apparatus disclosed in re claims 11 and 13 above discloses all the limitations of claim 34 (MPEP 2112.02).

In Re claim 35 the apparatus disclosed in re claims 14 and 15 above discloses all the limitations of claim 34 (MPEP 2112.02).

In Re claim 36 Makino in view of Pope as applied to claim 24 above discloses the claimed invention except for the pressure in the second gas suction unit lying within the range of -10kPa to -60kPa. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the claimed range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

In Re claim 37 Makino discloses stopping the delivery of the powder once the given amount has been dispensed (Column 5, lines 58-62). Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the filling lid (containing the filter unit and the holes for

the filling nozzle) would not be suitable for permanent seal and should be removed from the container.

In Re claim 38 the apparatus disclosed in Re claim 21 discloses all the limitations of claim 38 (MPEP 2112.02).

In Re claim 39 with reference to Figure 2 Makino discloses a container (18) to be filled with powder.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Herrmann et al. (US PGPub 2002/0074282 A1) discloses a twill weave filter. Zhu et al (US Patent 6,684,917 B2) discloses an apparatus for fluidizing powder. Snyder (US Patent 3,358,059) discloses a method of filling enclosures with powder comprising fluidizing it and moving it through a delivery line. Wegman (US Patent 6,497,259) discloses a filling apparatus which uses a suction source to plug the filling nozzle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. NIESZ whose telephone number is (571)270-3920. The examiner can normally be reached on mon-fri 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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